

Serial No. 10/022,208  
Reply to Office Action of October 13, 2004

Docket No. LT-0007

**Amendments to the Drawings:**

The attached sheets of drawings include Replacement Sheets for Figures 1-7. The Replacement Sheets correct the handwritten and marked-up changes submitted with the original drawings. Further, the attached Annotated Sheets Showing Changes illustrate proposed changes to Figures 6 and 8 to provide a feedback loop from Block S11 to Block S20 and Block S36 to Block S31, respectively.

Attachment: Replacement Sheets  
Annotated Sheet Showing Changes

**REMARKS/ARGUMENTS**

Claims 1-21 and 23-25 are pending in this application. By this Amendment, claims 17 and 19, Figures 6 and 8 and the specification are amended, claim 22 is canceled without prejudice or disclaimer and claims 23-25 are added. Applicant respectfully submits that no new matter is added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Applicant sincerely acknowledges the Office Action's indication that claim 9 defines patentable subject matter. However, for at least the reasons set forth below, Applicant respectfully submits all pending claims are in condition for allowance.

A. The Office Action objects to the specification for informalities. Applicant respectfully submits the above amendments obviate the grounds for the objection. Withdrawal of the objection to the specification is respectfully requested.

B. The Office Action objects to the drawings. Applicant respectfully submits that formal drawings for Figures 1-7 are included in the Replacement Sheets attached to this Amendment. Further, annotated sheets showing changes are provided for Figures 6 and 8 to include a feedback loop. Express approval of the proposed drawing amendments to Figures 6 and 8 is respectfully requested. Withdrawal of the objection to the drawings is respectfully requested.

C. The Office Action rejects claims 17-18 under 35 U.S.C. § 102(e) over U.S. Patent No. 6,694,442 to Yeh. The Office Action further rejects claims 1-3, under 35 U.S.C. § 103(a)

over Yeh in view of U.S. Patent No. 5,719,510 to Weidner (hereafter Weidner). The Office Action further rejects claim 4 under 35 U.S.C. § 103(a) over Yeh and U.S. Patent No. 6,079,022 to Young. The Office Action rejects claims 5-7 under 35 U.S.C. § 103(a) over Yeh in view of U.S. Patent No. 6,609,211 to Atkinson. The Office Action rejects claims 8, 11, 16 and 19-22 under 35 U.S.C. § 103(a) over Yeh, Weidner and Atkinson. The Office Action rejects claim 10 under 35 U.S.C. § 103(a) over Yeh, Weidner, Atkinson and Young. Finally, the Office Action rejects claims 12-15 under 35 U.S.C. § 103(a) over Yeh, Weidner, Atkinson and Parrish. Since the references, individually or in combination, fail to disclose or suggest all the features in the claims, the rejections are respectfully traversed.

The Office Action asserts that Yeh discloses with respect to the independent claims such as independent claim 1, setting a throttle rate of a clock to a predetermined initial value, the clock being used for a data bus connected between a CPU and a controlling device, detecting a user's pressing of a button if a power source is battery and adjusting the set throttle rate according to the user's button press. Further, the Office Action asserts Weidner discloses detecting a remaining battery capacity, and adjusting the set throttle rate according to the detected remaining battery capacity. See page 4, Item 6 of the Office Action.

Applicant respectfully submits that generally Yeh is directed toward event controllers 70, 270 that place system controller 30 and CPU 20 into an idle/suspended state in which a clock generator can change the host clock signal 34, 234 to a new frequency, and then the event controllers 70, 270 activate the CPU and system controller from the idle/suspended state.

Beneficially, Yeh reduces the likelihood that system components will crash when the frequency of their timing signals is changed. See column 6, line 40-52 of Yeh. A system controller 230 of Yeh does not change the frequency of the host clock signal 234 when providing the same for a front bus 232, a memory bus 235 and a video bus 236, but merely passes through the received host clock signal 234 unchanged.

Thus, Applicant respectfully submits that Yeh does not teach or suggest adjusting the set throttle rate, for example of a host bus such as a bus between a CPU and a controlling device, according to the detected remaining battery capacity or based on CPU load as variously recited in claims 1, 5, 8, 16, 17 and 21.

Applicant respectfully submits that Weidner does not teach or suggest adjusting the set throttle rate, for example of a host bus such as a bus between a CPU and a controlling device, according to the detected remaining battery capacity or based on CPU load as variously recited in claims 1, 5, 8, 16, 17 and 21. In contrast, Applicant respectfully submits that Weidner discloses a clock generator where a software controller can select output signal frequency based on amount of power, not for example, a throttle rate of a clock for a bus such as between a CPU and a controller. Thus, Weidner does not teach or suggest such features

In embodiments according to the invention, a host bus (e.g., between CPU and controller) clock is adjusted by using a throttling technology based on a remaining battery or CPU load (e.g., usage). However, Applicant respectfully submits that Yeh and Weidner do

not disclose or teach adjusting of a throttle rate of a bus (e.g., host bus between a CPU and controller clock) clock based on a remaining battery or CPU load and combinations thereof as recited.

Applicant respectfully submits that Young discloses clock control circuit 21, which can be replaced by dynamic clock controller as shown in Figure 3. Thus, Young discloses a variable speed clock supply component 41 supplies clock signals to the components (e.g. bus components 44A...44N) coupled to a bus 45 (e.g. such as a PCI bus). See Figures 1, 3 and 4 and column 3, lines 37-50. Young further discloses an idle detector/timer component 43 that detects the bus 45 is idle (e.g. no activity on the bus). Thus, Young appears to disclose clock controller 21 and variable speed clock supply 41 respectively can control a clock speed of a clock signal provided to devices coupled to a bus such as the PCI bus 7 and the bus 45.

Applicant respectfully submits that Atkinson discloses a utilization-base power management of a clock device. Atkinson appears to disclose adjusting a system clock frequency based on CPU activity such as memory page misses, IO write cycles or other events. See the Abstract and column 5, lines 1-22 of Atkinson. Thus, Atkinson does not appear to disclose adjusting a system clock frequency based on CPU load.

Thus, Applicant respectfully submits that Weidner, Young, Atkinson and Parrish do not teach or suggest at least features of a bus clock controlling method in a computer and combinations thereof or a computer and combinations thereof as variously recited in the

independent claims and lacking from Yeh. Thus, Applicant respectfully submits that Yeh, Weidner, Young, Atkinson and Parrish, individually or in combination, would not result in at least features of a bus clock controlling method in a computer including setting the throttle rate of a clock, the clock being used for data bus connected between a CPU and the controlling device, detecting a remaining battery capacity and adjusting the set throttle rate according to the detected remaining battery capacity and combinations thereof as recited in claim 1.

For at least the reasons set forth above, Applicant respectfully submits claim 1 defines patentable subject matter. Claims 5, 8, 16, 17 and 21 define patentable subject matter for at least reasons similar to claim 1. Claims 2-4, 6-7, 10-15, 18-20 depend from claims 1, 5, 8 and 17, respectively, and therefore also define patentable subject matter for at least that reason as well as their additionally recited features. Claim 22 is canceled without prejudice or disclaimer. Withdrawal of the rejection of claims 17-18 under 35 USC § 102 and 1-8, 10-16 and 19-22 under 35 USC § 103 is respectfully requested.

D. Claims 23-25 are newly added by this Amendment and believed to be in condition for allowance.

### **CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact

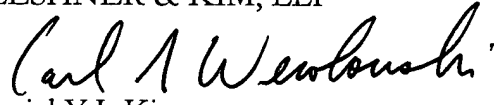
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the undersigned attorney, Carl R. Wesolowski, at the telephone number listed below. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: January 12, 2005**

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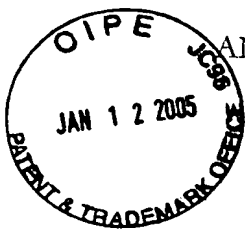
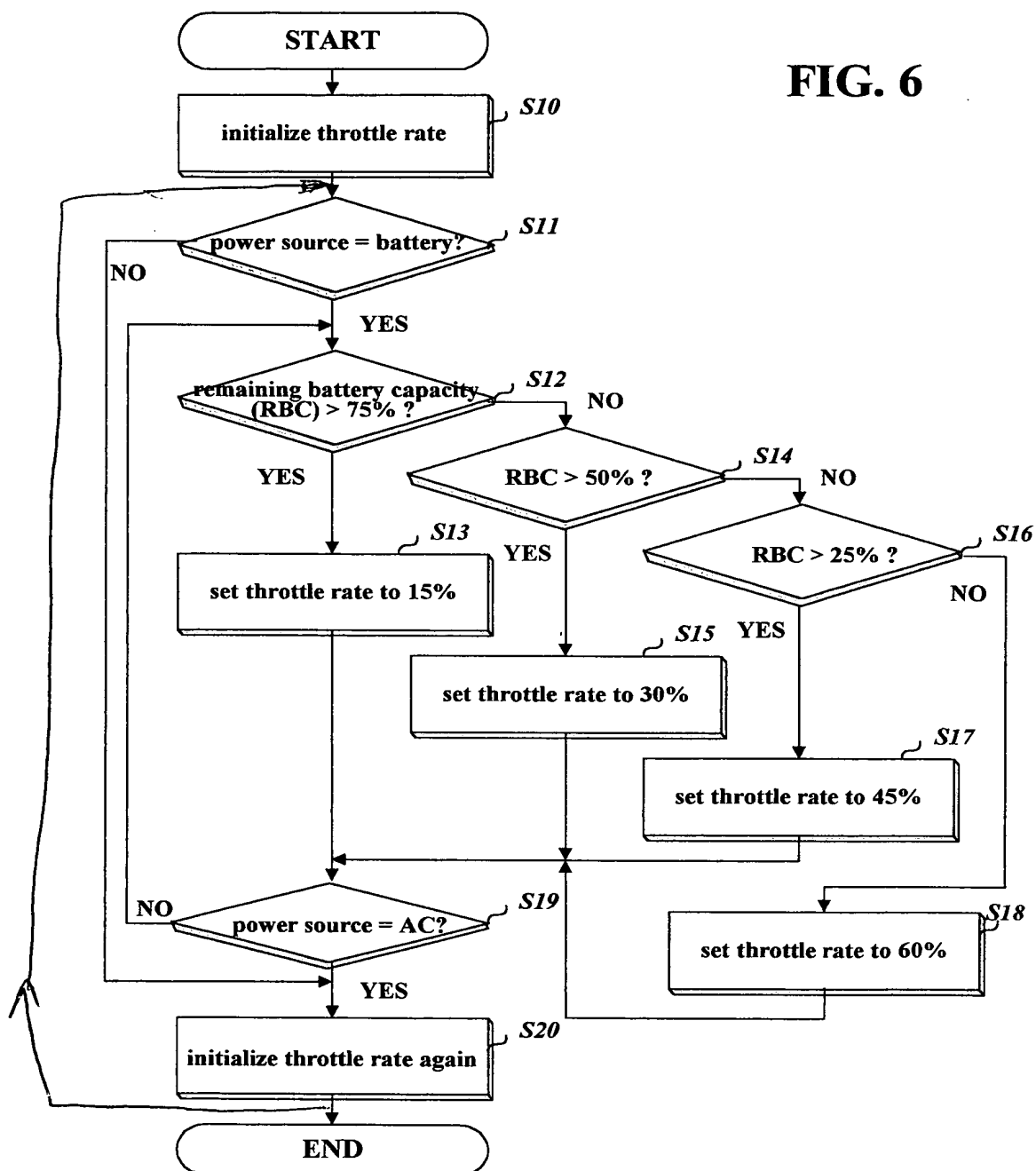


FIG. 6





**FIG. 7**

Remaining Battery Capacity	System Performance	Throttle Rate of Bus Clock
100 %	100 %	0 %
75 %	85 %	15 %
50 %	75 %	30 %
25 %	55 %	45 %
0 %	40 %	60 %

